Exponents: Worksheet -2

1. $(0.0001)^{\frac{3}{4}}$ = [ ]

a) 0.001 b) 0.0001 c) 0.00001 d) 0.1

2. The value of $\left(\frac{32}{243}\right)^{-3/5}$ = [ ]

a) $\frac{27}{8}$ b) $\frac{8}{27}$ c) $\frac{64}{27}$ d) $\frac{27}{64}$

3. If $2^{2x} + 2^{x+2} - 32 = 0$ then x = [ ]

a) 1 b) 2 c) -2 d) 3

4. If $2^4 + 2^4 + 2^4 + 2^4 = 2^x$ then the value of x is [ ]

a) 2 b) 3 c) 6 d) 5

5. $a^{x+y-z} \times a^{x-y+z} \times a^{y-x+z}$ = ? [ ]

a) 0 b) 1 c) a^{x+y+z} d) -1

6. $x^y = y^x$ and $x \neq y$ then (x,y) can be [ ]

a)(2,-4) b)(4,2) c)3,9 d) None

7. The value of $\frac{1}{1+x^y} + \frac{1}{1+x^{-y}}$ = [ ]

a) 0 b) 1 c) -1 d) $x^y + x^{-y}$

8. If $a = 10^3 \times 0.0099$ $b = 10^{-2} \times 110$ then $\sqrt{\frac{b}{a}}$ = [ ]

a) 9 b) 3 c) $\frac{1}{9}$ d) $\frac{1}{3}$

9. Simplest form $\left(4\sqrt{\frac{81}{256}}\right)^{-3}$ of is [ ]

a) $\frac{25}{36}$ b) $\frac{64}{27}$ c) $\frac{4}{9}$ d) none

10. The value of $\sqrt[p]{x^{q-r}} . \sqrt[q]{x^{r-p}} . \sqrt[r]{x^{p-q}}$ [ ]

a) x b) x^0 c) x^2 d) none

11. If $3^x + 4^x = 5^x$ then x = [ ]

a) 4 b) 3 c) 2 d) 1